UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
LE, MICHAEL

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/789,771	IKEGAYA ET AL.
	Examiner	Art Unit	
	Michael Le	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _27 February 2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-13_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-13_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _27 February 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _2/27/04, 3/21/05_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Priority

Applicant's claim of foreign priority to Japanese Patent Application 2003-091225 under

35 U.S.C. 119(a)-(d) is acknowledged. A certified copy of Japanese Patent Application 2003-

091225 has been received. Consequently, claims 1-13 have been examined with a priority date

of March 28, 2003.

Applicant is requested to amend the Specification by adding the claim to foreign priority

as the first paragraph.

Specification

1.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a
separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed
150 words in length since the space provided for the abstract on the computer tape used by the
printer is limited. The form and legal phraseology often used in patent claims, such as "means"
and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist
readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the
title. It should avoid using phrases which can be implied, such as, "The disclosure concerns,"
"The disclosure defined by this invention," "The disclosure describes," etc.

2.   The abstract of the disclosure is objected to because of the use of legal phraseology in

line 4. Correction is required. See MPEP § 608.01(b).

3.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

The following title is suggested: System and Method of Data Migration for Safe Removal

of Storage Devices.

4.   The disclosure is objected to because of the following informalities:

5.   On page 14, line 13, --in-- has to be inserted after "specified".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

Claims 9-11 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

The basis of this rejection is set forth in a test of whether the invention is categorized as a

process, machine, manufacture or composition of matter and if the invention produces a useful,

concrete and tangible result.   Mere ideas in the abstract (i.e., abstract idea, law of nature, natural

phenomena) are found to be non-statutory subject matter. For a method claim to pass muster, the

recited process must produce a useful, concrete and tangible result.

In the present case, **claims 9-11** all recite a program for a computer system, however it

does not recite that the computer program is executed by the computer or that the program is

embodied in a computer readable medium. Claims 9-11 merely recite a list of software functions

(i.e. a program listing) and although the program may be executed by a computer, the program

itself is not a process and therefore can not be categorized in a statutory category of invention.

Since claims 9-11 do not recite a computer executing the computer program or a computer

readable medium embodying the computer program, the subject matter of the claims are

nonstatutory function descriptive material.

To expedite a complete examination of the instant application, the claims rejected under

35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of

applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   **Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek et**

al. (US Patent 6,108,748) provided by Applicant in the Information Disclosure Statement,

hereinafter "Ofek", in view of Wilde (US Patent 5,991,753).

9.   In regards to **claim 1**, Ofek discloses a data migration system comprising:

a.   a computer (Ofek: Fig. 5, element 12);

b.   a storage device connected to said computer (Ofek: Fig. 5, element 14);

c.   means for determining whether a file, that is to be migrated, has already been

migrated to another storage device (Ofek: col. 7, lines 12-17, 22-55).

10.   Ofek does not expressly disclose means for registering identification information about

an unnecessary file to identify one or more unnecessary files and means for determining whether

a file stored on said storage device is one of said unnecessary files.

11.   Wilde discloses a list, called a lock list, maintained by a system administrator (register

identification information about an unnecessary file) and is used to specify files that should be

excluded from migration (determine whether file is one of said unnecessary files) (Wilde: col.

14, lines 31-34).

12.   Ofek and Wilde are analogous art because they are from the same field of endeavor of

data migration.

13.   At the time of the invention it would have been obvious to a person of ordinary skill in

the art to modify the system of Ofek by adding means for registering identification information

about an unnecessary file to identify one or more unnecessary files and means for determining

whether a file stored on said storage device is one of said unnecessary files, as taught by Wilde.

14.   The motivation for doing so would have been because allowing a system administrator to

maintain a list of files not to be migrated (unnecessary files), it allows for performing flexible

migration and saves time and processing because only necessary files are migrated and

unnecessary files are not (Wilde: col. 13, lines 57-67; col. 14, lines 1-4).

15.   In regards to **claim 2**, Ofek discloses said storage device can be removed depending on

results from said first and second determining (Ofek: col. 12, lines 58-67).

16.   In regards to **claim 3**, Ofek discloses a data element map/table that stores information

about particular data elements, that includes a flag indicating whether or not the data element is

presently stored in the second data storage system (said another storage device) (Ofek: col. 8,

lines 25-53). Ofek further discloses that said map/table is used to determine whether or not a

particular track has already been migrated to the second system or not (determine whether file

migration of a file to said another storage device is to be performed) (Ofek: col. 8, lines 54-57).

17.   In regards to **claim 4**, Ofek discloses wherein whether or not a file stored on said storage

device is migrated to said another storage device is determined by determining whether said file

is duplicated on said another storage device (Ofek: col. 8, lines 54-57).

18.   In regards to **claim 5**, Ofek discloses wherein said another storage device comprises a

storage medium that is removable (Ofek: col. 6, lines 26-39)[1].

19.   **Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek et**

al. (US Patent 6,108,748) provided by Applicant in the Information Disclosure Statement,

hereinafter "Ofek", in view of Wilde (US Patent 5,991,753), further in view of Mogi et al.

(US Patent Pub 2003/0093439) provided by Applicant in the Information Disclosure

Statement, hereinafter "Mogi".

20.   In regards **claim 6**, Ofek and Wilde disclose the limitations of parent claim 1 as

addressed above. Ofek further discloses a second computer connected to said computer, to said

storage device and to said another storage device wherein said second computer comprises said

second means for determining (Ofek: Fig. 5, element 12A; col. 7, lines 12-17, 22-55). As

addressed in the rejection to claim 1, Wilde discloses a list, called a lock list, maintained by a

system administrator (register identification information about an unnecessary file) and is used to

specify files that should be excluded from migration (determine whether file is one of said

unnecessary files) (Wilde: col. 14, lines 31-34). Wilde further discloses detecting a file's

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[1] A disk drive is removable.

attributes (collects information about a file to be stored) to determine whether the file is the

original file or the transition file (Wilde: col. 6, lines 1-11). At the time of the invention, it

would have been obvious for one of ordinary skill in the art to add means for registering and said

first means for determining, taught by Wilde, to said second computer of Ofek.

21.   The motivation for doing so would have been because allowing a system administrator to

maintain a list of files not to be migrated (unnecessary files), it allows for performing flexible

migration and saves time and processing because only necessary files are migrated and

unnecessary files are not (Wilde: col. 13, lines 57-67; col. 14, lines 1-4).

22.   Ofek and Wilde do not expressly disclose a means for displaying information to indicate

that data migration is completed for said storage device. Ofek does disclose completion

messages are generated when data migration has completed (Ofek: col. 19, lines 51-56).

23.   Mogi discloses a display screen on an administrator terminal, which allows the

administrator to view data migration plans (Mogi: Fig. 14; para. 0034; para. 0064, lines 9-11).

Mogi further discloses a data position management program, which controls the data migration

process that is displayed on the display of the administrator terminal (Mogi: para. 0110, lines 1-

5) that also displays successful preparation of the data migration (Mogi: para. 0121, lines 1-7).

24.   Ofek, Wilde and Mogi are analogous art because they are all directed towards the same

field of endeavor of data migration.

25.   At the time of the invention, it would have been obvious to one of ordinary skill in the art

to modify the combined system of Ofek and Wilde by adding to the second computer a means

for displaying information to indicate that data migration is completed for said storage device, as

taught by Mogi.

26.   The motivation for doing so would have been because it is desirable to allow an

administrator to know when a data migration process has completed.

27.   In regards to **claim 7**, Ofek discloses completion messages are generated when data

migration has completed (Ofek: col. 19, lines 51-56) and determining if the file has been

migrated to another storage device (Ofek: col. 8, lines 54-57). Determining if a file is one of said

unnecessary files was addressed above in the rejection to claim 6, as disclosed by Wilde. Wilde

discloses a list, called a lock list, maintained by a system administrator (register identification

information about an unnecessary file) and is used to specify files that should be excluded from

migration (determine whether file is one of said unnecessary files) (Wilde: col. 14, lines 31-34).

28.   In regards to **claim 8**, the limitation was addressed above in the rejection to claim 6 as

being disclosed by Wilde. Wilde discloses detecting a file's attributes (collects information

about a file to be stored) to determine whether the file is the original file or the transition file

(Wilde: col. 6, lines 1-11). Wilde further discloses a list, called a lock list, maintained by a

system administrator (register identification information about an unnecessary file) and is used to

specify files that should be excluded from migration (determine whether file is one of said

unnecessary files) (Wilde: col. 14, lines 31-34). Ofek discloses determining whether or not a file

stored on said storage device is migrated to said another storage (Ofek: col. 8, lines 54-57).

29.   **Claim 9** is substantially similar to claims 1 and 6 in the form of a program for a computer

system. Consequently, it is rejected for the same reasons.

30.   In regards to **claim 10**, the programs have been addressed above in the rejection to claims

1 and 6 as being disclosed by Ofek and Wilde. Ofek discloses a migration completion judgment

program (Ofek: col. 19, lines 51-56)[2] and a removable device detection program (Ofek: col. 12,

lines 43-67)[3]. Wilde discloses an unnecessary-file database operation program (Wilde: col. 13,

lines 57-67; col. 14, lines 30-34)[4].

31.   In regards to **claim 11**, Ofek and Wilde do not expressly disclose displaying unnecessary

file candidates and prompting a user to select an unnecessary file from said displayed

unnecessary file candidates. Wilde does disclose a list, called a lock list, maintained by a system

administrator (register identification information about an unnecessary file) and is used to

specify files that should be excluded from migration (Wilde: col. 14, lines 31-34).

32.   Mogi discloses a display screen on an administrator terminal, which allows the

administrator to view data migration plans (Mogi: Fig. 14; para. 0034; para. 0064, lines 9-11).

Mogi further discloses a data position management program, which controls the data migration

process that is displayed on the display of the administrator terminal (Mogi: para. 0110, lines 1-

5) that also displays successful preparation of the data migration (Mogi: para. 0121, lines 1-7).

33.   At the time of the invention, it would have been obvious to one of ordinary skill in the art

to modify the combined system of Ofek and Wilde by adding the feature of displaying

unnecessary file candidates and prompting a user to select an unnecessary file from said

displayed unnecessary file candidates using the display of the administrator terminal taught by

Mogi.

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[2] Software determines when data migration has completed.
[3] Storage devices can be connected and removed from the system and the system detects them in order to transfer
data between them. Therefore the system has a removable device detection program.
[4] The configuration file (database) is processed to determine data migration settings such as what files to exclude
from migration (unnecessary files).

34.   The motivation for doing so would have been because Mogi discloses a user interface on

a display of the administrator terminal for preparation of data migration. Selecting files to

exclude from data migration, as taught by Wilde, is part of the preparation and it would be more

easily done if it were graphically performed with a graphical user interface.

35.   In regards to **claim 12**, Ofek discloses a data migration support device connected via a

network to a first computer system that includes a removable storage device and a second

computer connected to said removable storage device (Ofek: Fig. 5, element 26 (data migration

support device)), the device being a computer (Ofek: Fig. 5, element 26; col. 6, lines 9-13; a

computer comprises a processor, controller, memory. It is connected to the network as seen in

figure 5, therefore it has a communication device). Ofek further discloses determining whether a

file has migrated to another storage device (Ofek: col. 8, lines 54-57).

36.   Ofek does not expressly disclose registering identification information about an

unnecessary file with said memory to identify a plurality of registered unnecessary files and

judging whether a file stored on the removable storage device is one of said registered

unnecessary files.

37.   Wilde discloses a list, called a lock list, maintained by a system administrator (register

identification information about an unnecessary file) and is used to specify files that should be

excluded from migration (determine whether file is one of said unnecessary files) (Wilde: col.

14, lines 31-34).

38.   Ofek and Wilde are analogous art because they are from the same field of endeavor of

data migration.

39.   At the time of the invention it would have been obvious to a person of ordinary skill in

the art to modify the system of Ofek by adding the feature of registering identification

information about an unnecessary file with said memory to identify a plurality of registered

unnecessary files and judging whether a file stored on the removable storage device is one of

said registered unnecessary files, as taught by Wilde.

40.   The motivation for doing so would have been because allowing a system administrator to

maintain a list of files not to be migrated (unnecessary files), it allows for performing flexible

migration and saves time and processing because only necessary files are migrated and

unnecessary files are not (Wilde: col. 13, lines 57-67; col. 14, lines 1-4).

41.   Ofek and Wilde do not expressly disclose a display unit that displays information to

indicate that data migration is completed for said removable storage device. Ofek does disclose

completion messages are generated when data migration has completed (Ofek: col. 19, lines 51-

56).

42.   Mogi discloses a display screen on an administrator terminal, which allows the

administrator to view data migration plans (Mogi: Fig. 14; para. 0034; para. 0064, lines 9-11).

Mogi further discloses a data position management program, which controls the data migration

process that is displayed on the display of the administrator terminal (Mogi: para. 0110, lines 1-

5) that also displays successful preparation of the data migration (Mogi: para. 0121, lines 1-7).

43.   Ofek, Wilde and Mogi are analogous art because they are all directed towards the same

field of endeavor of data migration.

44.   At the time of the invention, it would have been obvious to one of ordinary skill in the art

to modify the combined system of Ofek and Wilde by adding to the second computer a means

for displaying information to indicate that data migration is completed for said storage device, as

taught by Mogi.

45.   The motivation for doing so would have been because it is desirable to allow an

administrator to know when a data migration process has completed.

46.   In regards to **claim 13**, the limitation was addressed above in the rejection to claim 12.

Ofek discloses a data element map/table that stores information about particular data elements,

that includes a flag indicating whether or not the data element is presently stored in the second

data storage system (said another storage device) (Ofek: col. 8, lines 25-53) and said map/table is

used to determine whether or not a particular track has already been migrated to the second

system or not (determine whether file migration of a file to said another storage device is to be

performed) (Ofek: col. 8, lines 54-57). Wilde discloses a list, called a lock list, maintained by a

system administrator (register identification information about an unnecessary file) and is used to

specify files that should be excluded from migration (determine whether file is one of said

unnecessary files) (Wilde: col. 14, lines 31-34).

47.   In regards to the limitation wherein said controller loads said unnecessary-file

information and said migration history into said memory via said communication device, Ofek

discloses the system configuration device (data migration support device) that loads

configuration information and the data map/table (migration history) (Ofek: col. 6, lines 5-13,

19-24).

Conclusion

48.   The following are prior art made of record and not relied upon but is considered pertinent

to applicant's disclosure.

49.   Kenley et al. (US Patent 5,276,867) discloses a storage system that migrates data in

response to a threshold level in the storage device. Nishihara (US Patent 5,359,512) discloses a

system for migrating files from a slower storage device to a higher speed storage device for file

processing. Healy et al. (US Patent 5,644,736) discloses a system and method for selecting files

using a graphical user interface.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael Le whose telephone number is 571-272-7970. The

examiner can normally be reached on Mon-Thurs : 9:30am-6pm, Fri: 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Le
Art Unit 2163
November 28, 2005

UYEN LE
PRIMARY EXAMINER